GRANT-PLATTE RIVERS
STATE OF THE BASIN REPORT

VOLUME 9

MISSISSIPPI RIVER WATERSHED

(GPO7)

Wisconsin Department of Natural Resources.
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GP07 Map

MISSISSIPPI RIVER WATERSHED (GP07)

The Mississippi River Watershed is a 107 square mile watershed in Grant County that stretches along the Mississippi River from Wyalusing State Park to Grant River's confluence with the Mississippi River. Steep, wooded slopes that drain to the Mississippi River floodplain characterize the topography of the watershed. Local topographic relief near the Mississippi River is significant, and some bluffs rise over 400 feet above the river.

Agriculture is the dominant land use in the watershed. There are sizable woodlots in the watershed, particularly on the steeper slopes. Only about 55 percent of the land is in cropland or pasture in the watershed (Fix, 1991). Due to the slopes and local relief, this watershed has the highest annual soil loss (16.3 tons per acre per year) in the Grant-Platte basin (Fix, 1991). There are only two communities with wastewater treatment plants in the watershed. They are **Cassville** and **Bagley**. These facilities discharge to Jack Oak Slough and unnamed tributary to the Mississippi River, respectively.

There are 68 miles of streams in the watershed and most of these are smaller with steep gradients. The streams are very "flashy" (rapid water level increases and decreases during runoff events) because of the steep gradients. Consequently, local erosion is a problem during runoff events. The smallness of the streams and the steep gradients tend to limit natural habitat. There is little recent information on water quality, habitat, or fisheries conditions for streams in the watershed. Overall, the watershed and the streams in the watershed have been ranked low with respect to non-point source pollution, although the groundwater has a high potential for groundwater contamination as a result of non-point source pollution.

The streams in the Mississippi River watershed drain to either Pool 10 or 11 of the Mississippi River. There are a number of backwater sloughs along the Mississippi River and in these pools. They all lie within the Upper Mississippi River Wildlife and Fish Refuge administered by the US Fish and Wildlife Service. The sloughs are used as feeding and resting areas by waterfowl and other migratory birds. The area is a destination for bird watchers as well as sportsmen and women. Many of these sloughs offer excellent fishing and hunting opportunities. There are a number of federal, state and local boat launch areas providing access to the Mississippi and the sloughs.

The primary water quality problem of the backwater sloughs and pools 10 and 11 is the sediment in runoff from uplands that fill in portions of the pools and sloughs. The sediment also brings nutrients, which in turn promotes excessive aquatic plant growth and exacerbates downstream water quality problems. Waves created by the large river barge tows plying the river have eroded some of the islands reducing habitat and adding to the sediment load. The Wisconsin DNR in cooperation with the Fish and Wildlife Service are working on projects to improve habitat along the river and pools. Zebra Mussels, an invasive exotic species, have become a problem in pools 10 and 11 of the Mississippi River. The presence of excessive numbers of zebra mussels in pools 10 and 11 are thought to be a reason for low dissolved oxygen (DO) in the river during a period of low flow in 1997 (Sullivan and Endris, 1997). For more information habitat restoration and water quality projects on the Mississippi River and pools 10 and 11, contact Terry Moe at the Wisconsin DNR office in LaCrosse, Wisconsin, 3550 Morman Coulee Road, LaCrosse, Wisconsin 54601.

Hunting, fishing and boating are important recreational activities in the watershed and the adjoining Mississippi River pools. Camping, nature study and hiking are other recreational activities available in the watershed. The watershed sits on the Mississippi River flyway, a major highway for migratory birds of all types. There are two Wisconsin state parks at least partially in the watershed, Wyalusing and Nelson Dewey. Both provide visitors with opportunities for camping, hiking, birding, boating and canoeing, nature study and just plain relaxing. Wyalusing is also open during winter offering winter camping and cross-country skiing. Stonefield Village, a recreated 1890's village, is the site of the home of Wisconsin's first governor, Nelson Dewey. It is also the site of the State Agricultural Museum. While technically not in the watershed, the U.S. Army Corps of Engineers runs a campground near Potosi. It offers camping as well as access to the Mississippi River. There are also private campgrounds in the watershed.

SURFACE WATER NARRATIVES

Chase Creek - Chase Creek is a high gradient spring fed tributary to the Mississippi River north of Glen Haven. The stream flows through a scenic steep wooded gorge (Lyons, 2000). About one mile is considered a class II trout stream (DNR, 1980), but its overall potential is limited by its shallow streambed, low flows, and steep gradient (Smith and Ball, 1972). Chase Creek is currently on the state's 303(d) list of impaired water bodies.

McCartney Branch - McCartney Branch is a small spring fed stream tributary to the Mississippi River between Cassville and Potosi. The stream has a limited sport fishery in its lower reach (Smith and Ball, 1972). The remainder is considered to have a limited warmwater forage fish community (Lyons, 2000). Non-point sources of pollution have affected instream habitat.

Sandy Creek - This spring fed stream is tributary to the Mississippi River southeast of Bagley. Slightly less than 50% of its watershed is forested. The remainder is either cropland or pasture. Although it is classified as a class II trout stream, it is limited by its shallow streambed and flashy nature. Both of these factors lend to water temperatures that are marginal for trout reproduction (Smith and Ball, 1972). Sandy Creek is currently on the state's 303(d) list of impaired water bodies.

RECOMMENDATIONS FOR THE MISSISSIPPI RIVER WATERSHED

Protecting and Improving Water Quality and In-Stream Habitat

- The DNR should conduct baseline monitoring on **Chase Creek** and **Sandy Creek** by 2006.
- The DNR should monitor, evaluate portions of **Chase Creek** and **Sandy Creek** to determine if they should be removed from the state's 303(d) list of impaired waters.
- The DNR should monitor **Sandy Creek** to track the presence of rare water related species.